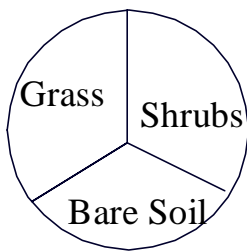




THE COVEY HEADQUARTERS

Volume 3 Issue 2 Summer 2004

This newsletter issue starts the third year of an effort aimed at cooperators and sportspeople in Missouri to provide information on restoring quail. This is a joint effort of the Missouri Department of Conservation, USDA-Natural Resources Conservation Service, University of Missouri Extension and Quail Unlimited. If you would like to be removed from this mailing list or have suggestions for future articles please contact jeff.powelson@mdc.mo.gov or 816-232-6555 x122 or write to the address shown.



The name of this newsletter is taken from an old concept.....that a quail covey operates from a headquarters (shrubby cover). If the rest of the covey's habitat needs are nearby, a covey should be present. We are encouraging landowners to manage their quail habitat according to this concept. Use shrubs as the cornerstone for your quail management efforts. Manage for a diverse grass, broadleaf weed and legume mixture and provide bare ground with row crops, food plots or light disking **right next to** the shrubby area.

Recreational Mowing- A Bad Habit

Once the food plots or crops are in the ground and the hay harvested, many landowners can't stand being away from the machinery.....they get on a tractor and start mowing all of the odd areas on the farm that they can get to!! **THIS IS NOT A QUAIL-FRIENDLY PRACTICE.....**Studies have shown that quail populations are doubled when recreational mowing is avoided. We recommend you sell your mower and buy a disk or sprayer! Save the cover for quail nesting and brooding. Where quail are concerned a mower should only be used to control weed growth in new shrub or grass plantings.

Convert Fescue and Brome Fencelines to Quail Friendly Cover

by Bill White, Private Land Programs Supervisor, Jefferson City

Perhaps the best thing I ever did for quail on my farm was restoring a fenceline to quail cover. It was a typical north Missouri fenceline full of honeylocust and fescue and seldom used by quail. 80% of the trees were less than 30 years old. I first sprayed a 30 foot border around the edge of the field to kill the fescue and brome. I waited til fall when the leaves had fallen off what remained of the shrubby cover and used an ATV-mounted sprayer filled with a 2% Roundup mix. I used the handgun on the sprayer to reach back in as far under the trees as I could get. That winter I dropped every tree on my side of the fence and pretty much left them lie after they fell. The results were instant.....within 2 weeks I had a covey of quail in the fenceline on a daily basis. They stayed there til the covey broke up in May. Along this 600 foot section of fenceline I began seeing broods in June. By August I would see 3 different broods totaling about 70 chicks while walking this fencerow! The fenceline grew up in annual weeds with an overhead canopy of downed trees. When I conducted my fall covey call count I counted 12 coveys on me and my neighbor's farm.....a doubling of quail coveys in one year. Most coveys on my neighbor in that survey were within a hundred feet of this fenceline.

While other factors like the weather surely contributed to my increased quail population, I cannot forget the instant and constant use of the renovated fenceline by quail since I completed the project. The total project took me about 3 afternoons, but payed the best dividends of all my quail restoration efforts since 1997.

Try it and see if it will work for you and your quail.



Declining Shrubby Grassland Birds

Many people believe that quail are suffering a long-term decline due to predators, turkeys, etc. However, most people are not aware that birds like loggerhead shrike, grasshopper sparrow and bobolinks, associated with the same habitats as quail, are suffering a decline. Conversely, many birds associated with forested habitats are on the increase. This increase coincides with an increase in forested acres in Missouri. Future issues will feature a new grassland bird, each time, to highlight the plight of birds that use this habitat.

Bell's Vireo

by Dr. Jane Fitzgerald, Central Hardwoods Bird Conservation Region Coordinator



The Bell's Vireo is a small and somewhat drab bird that breeds in shrubby grasslands of the central and southwestern United States and winters in Mexico and Central America. The species was named in honor of John Graham Bell, a famous taxidermist of New York who accompanied John James Audubon on a trip along the Missouri

River in 1843. At about 4 1/2 inches long, olive above and dull yellow below, it would often go unnoticed if it weren't for its harsh, chatter-like song.

The Bell's Vireo places its nest in or under shrub thickets that are interspersed in native grasslands. The plum and dogwood thickets that sprang up along low wet areas of the prairies provided much of its habitat historically. Like the bobwhite, it has suffered dramatic population declines across much of its range due to widespread loss of native grass-shrubland habitats. Partners in Flight (PIF), a landbird conservation initiative, estimates there are about 1.1 million Bell's Vireos breeding in the United States today. Applying the same methodology, PIF estimates there are roughly 15 million Northern Bobwhite and 110 million Mourning Doves.

Research in Illinois indicates that Bell's Vireo may be "area-sensitive", meaning that the birds were seldom found breeding in tracts of suitable habitat less than about 80 acres in size. The species often co-occurs with healthy numbers of quail and other grass-shrubland bird species of conservation concern where large areas are managed with both fire and thinning to promote native grass, forbs and shrub thickets. One of the best areas to see the results of management that supports this group of birds is MDC's 2,000 acre White River Trace Conservation Area, south of Rolla, Missouri. If you're interested in seeing what's been done there and are going to be in the vicinity, ask manager Rob Chapman to give you a tour!

Burn in Patches When Fall Burning

Research from Oklahoma has shown that burning smaller patches in a prairie pasture landscape will double the number of grassland birds. You can apply the same concept to your own property and increase not only quail numbers, but the number of other grassland birds. Patch burning is especially important if you decide you want to burn prior to the hunting season, because you can still have a place to hunt while accomplishing your burn objectives. Patch burning may be the safest before a killing frost, as the native grass fuel load still has some moisture in the live plants and much of the energy of the fire will be directed at cooking off the excessive moisture. Burn when the humidity is 40-50% with a steady breeze. A good disked firebreak is a necessity when patch burning. The size of your patch will depend on the size of your fields and the amount of time you want to invest in burning. Most people with 100 acres or more of grass are burning 20 acres patches, while those with 20 acre fields are burning 3-5 acre patches. You should plan to burn enough patches each year, so that you have burned the entire field every 3-4 years. If you employ this technique you will be supplying nesting and roosting cover in the unburned portion of the field and brood-rearing in the burned portion of the field. Quail will not have to move broods very far after hatching to find brooding cover. If fescue, brome, sericea lespedeza or woody sprouts are a problem in a portion of a field, patch burning can be used to prepare the site for a chemical application. Patch burning also increases edge in the middle of grass fields. Research has shown that quail prefer to nest near edges. So you have increased the amount of useable nesting cover for quail on your property with patch burns. In theory, you should produce more quail.

Did You Know?

In Missouri alone, forestland increased from 12.9 million acres in 1972 to 14 million acres in 1989. Between 1989 and 2000 total volume of all live trees on timberland

increased 25 percent from 13.9 billion cubic feet to 17.3 billion cubic feet. *Missouri's Forest Resource, 1989 and 2000*. Much of this increase is from cedar, elm, honey locust and hedge. Still think the quail habitat has not changed?

Key Quail Habitat Practices

By Dan Switzner, Natural Resources Conservation Service, Blue Springs

The following is a short description of the main practices used to improve quail habitat. As you read through these, think about your property. If you are missing any of the habitats achieved by implementing these practices, then don't blame the predators for the quail being in short supply. These little rascals need *shrubby cover, a diverse managed grassland and bare ground next to each other*, for a viable quail population. If you already have in good supply any one of these individual habitat components, then don't worry about doing the practice that provides it.



1. **Disk Strips** - Quail like areas that have 25-50% bare ground. Light disking will not only achieve this but allows legumes and annual weeds to grow. Common ragweed (sorry allergy sufferers) is a top quail food.
2. **Edge Feathering or Fenceline/Woody Draw Renovation** (Cutting down trees 50 feet along the treeline and 30 feet deep into the timber at intervals of every 100 yards). This allows the sunlight to encourage the growth of plants like wild plum, wild grape, etc. that produce food and cover for quail. Do not stack the trees, leave them lay where they fall. This area becomes the covey headquarters. This is one of the most missing quail elements. If you can see through it in January and February, it is not a good covey headquarter. Paint the stumps of the trees with the appropriate herbicide immediately after cutting to prevent sprouting.
3. **Prescribed Burning** – This is one of the best ways to remove heavy grass litter, which is acceptable only in small amounts for quail. Heavy grass litter makes a great home for rodents which attracts and supports a snake population. Snakes are one of the primary predators of quail nests. Removal of litter by prescribed burning physically allows quail to move through cover; removes game trails, more randomly distributes quail nesting patterns, and allows annual weeds and legumes a chance to grow. Light disking is much easier after a prescribed burn. Burn anytime between *August 15* and *March 1*. Only burn 1/3 to 1/2 of the grass in any one year. Firebreaks may be made by disking 10 ft. perimeters around the area to be burned. Disk till the firebreak is pure dirt. This area may be seeded to legumes and/or foodplots.
4. **Legume Seeding** – Legumes like alfalfa, red clover and lespedeza are vital for brood rearing, if they are lightly sown. Legumes harbor good insect populations. Newly hatched quail eat mostly insects for the first few weeks of their life. Momma quail is going to head them straight to the legumes when they hatch. Better have them ready.
5. **Wildlife Foodplot** – Probably the most implemented practice and probably the most overrated. They don't accomplish much if you don't have covey headquarters, bare ground, and legumes. Forage sorghum is probably the best grain to plant. It grows to about 8 feet tall (deer can't eat it like they do all the others (corn, beans, sunflowers, and milo)) then falls over during the hard winter months, providing food AND cover when quail need it most.
6. **Shrub Planting** – If you don't have timber to make an edge feather to allow shrubs to grow naturally, then consider planting them. The minimum area is 1500 square feet with the shrubs planted on a 5X5 spacing. 60 will do the job, but hey, order 75 –100 and make a real planting. By virtue of the fact that you have read this far means you're really interested in providing good habitat. Shrub plantings will make a covey headquarters in 15 years without weed control, 7 years with weed control. You want to wait 15 years? Use mulch or herbicide for weed control! Species to plant include the shrubby dogwoods, wild plum, shrub lespedeza, blackberries, etc. NO TREES. Drag two or three dead cedar or hedge trees into the center of a field to create a downed tree structure and immediate woody cover.
7. **Native Warm-Season Grasses and Forbs Seeding** – Native warm season grasses provide a clump grass, green, shaded and therefore cool habitat for quail to enjoy during the hot summer months. Forbs (wildflowers and broadleaf weeds) provide seeds and bugs for their dining pleasure. My favorite native

grass planting for quail is composed of little bluestem and sideoats grama with a dash of as many different forb seeds as you can afford. Some of my favorite forbs – slender lespedeza, coreopsis, coneflowers, leadplant, roundhead lespedeza and purple prairie clover. There are lots more. Get a [Missouri Wildflower](#) book or check with your local natural resource professional for ideas and go to town.

Our goal is more quail, but we're happy with the results... so far!

By Aaron Jeffries, Area Biologist, Jefferson City

About ten years ago we purchased a 140 acre farm in central Missouri, which at the time was a mix of cropland, fescue pastures and red cedar/honey locust thickets. We're primarily interested in improving the property for wildlife and having a place on the weekends, so we rent the pasture and crop ground to a neighbor. The first couple years we dinked around, planting a food plot here, killing a little fescue there, but we never really accomplished anything for wildlife.

However, three years ago we made some significant changes. First, we developed a plan – good ideal. On an aerial map we divided the farm into 6, 20 acre units. **Then we determined what were the limiting factors for quail in each unit. In each unit we asked ourselves, do we have good nesting cover, good brooding habitat, enough brushy or woody escape cover, abundant food sources, and were all of these habitat types well interspersed in each unit.** For example, we found a cropfield unit had good brooding habitat and food, but was missing good shrubby cover and nesting habitat. In another unit dominated by cedar and locust we were missing everything! For each unit we made a list of limiting factors and then started working in the unit with the fewest limiting factors.

We first **excluded** cattle from two of the units and then **converted the fescue to warm-season grasses and wildflowers**. In some places we just let the broomsedge and annual seed-producing plants come back. In all the units we did some **edge feathering** to create immediate brushy cover. The golden rule with edge feathering is to leave the tree alone after you drop it, don't push them into dense piles. We also established some food plots and asked the renter to leave four rows of grain standing after harvest.

In 2003, we cleared or heavily thinned about 10 acres of cedar and locust – this practice is known as **Woody Cover Control**. While this created quite a "mess" the new openings quickly re-vegetated into ragweed, broomsedge and annual lespedeza – perfect quail and rabbit habitat. We also **sprayed** about 5 acres of fescue and **overseeded** the field with annual lespedeza and wildflowers.

Unfortunately last summer we were disappointed by the bobwhite response to all our hard work. After reevaluating our plan, we soon discovered quail were missing at least one important habitat requirement in each unit. Instead of having 6, 20 acre units we had 3, 40 or 50 acre units! What we were missing in most units was either good shrubby cover or good nesting cover or a good mix of all the habitat types in one unit.

To solve our problem we dragged cut cedars into areas with little or no brushy cover. These **downed tree structures** will serve as temporary woody cover. This spring we **planted shrubs** around the downed cedars which will create good shrubby cover in a few years. We also did some more edge feathering around the cropfields and signed up for a **Continuous CRP Filter Strip**, which we planted to little bluestem.

Like most landowners in central and southern Missouri we haven't seen our quail numbers rebound like some folks in northern Missouri. On the other hand we haven't failed. Our rabbit population has gone through the roof! We've also enjoyed the abundant wildflowers and songbirds that weren't present when there was only fescue and dense cedars. In fact, this spring I found two woodcock chicks brooding in a warm-season grass/forb planting, and we've already heard more quail whistling this summer than ever before. May be someday we have one of those 5 covey success stories, but if it doesn't happen this year or the next, we'll keep cutting and burning away!

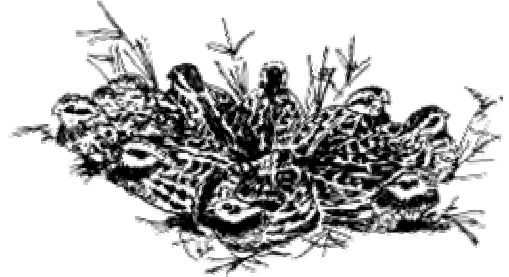
If You Build It.....They Will Come

James and Debbie Stephenson of Taney County, began restoring glades on their property several years ago. Glade communities consist of grasses, forbs, small shrubs, shallow soils, and exposed bedrock. Glades normally occur south of the Missouri River on south and west facing slopes. In the absence of fire, glades become choked with cedar, which shade out the ground cover and reduce plant diversity.

As the Stephenson's have removed cedars they have noticed several new species of birds such as bluebirds, goldfinches, and mourning doves moving into the area. Additionally, with more sunlight hitting the ground, grasses and forbs like indiagrass, big and little bluestem, Missouri primrose, bee balm, purple prairie clover, black-eyed susans, and various milkweeds have reappeared or increased. As an added bonus, quail have returned to parts of the Stephenson property.

One morning in mid-April James and Debbie heard the familiar call of "bobwhite". Although some quail had always existed on the property, their numbers were few, and declining with the invasion of cedars into their territory. This was the first time the Stephenson's had heard a quail on that portion of their property in over 10 years!

As the Stephenson's work to restore their glade community, quail habitat is improved. The cut cedars are providing good escape cover and the grasses and forbs are providing roosting and nesting cover. With the improved quail habitat the Stephenson's expect the quail to become well-established residents on their property. **Travis Dinsdale**



Private Land Conservationists in the Central Region have reported hearing more good quail stories from landowners this spring. Some landowners have reported hearing two or three times more bobwhites calling this summer than last year. **Aaron Jeffries**

Two landowners near St. Joseph report almost instant results after edgefeathering this last winter. Quail were calling from the downed trees most of the spring. When pairs were flushed from nearby fields they usually flew to the downed trees. An Andrew CO landowner pulled trees he cut in a fenceline out into the middle of the field in an effort to increase useable space for quail in the large field. When I conducted quail whistle counts this spring, there were birds calling from the loosely piled trees. **Jeff Powelson**

QUAIL HABITAT MANAGEMENT CALENDAR

August

- *Begin preparing firebreaks for fall and winter burns
- *Cool-season grass and legume seeding dates begin(South MO - Aug 15, North MO August 1)
- *Spray seresia lespedeza with Ally, Escort or Remedy. Use Roundup for spot treatments.

September

- *Begin burning prairies or native grass plantings to encourage wildflowers and set back rank grass
- *Cool-season grass and legume seeding dates end(South MO - Oct 15, North MO - September 30)
- *Till firebreaks and new food plots prior to onset of wet weather
- *Seed wheat, barley or rye into tilled firebreaks or foodplots
- *Spray brome and fescue with Roundup or Touchdown. Select, Poast and Fusilade herbicides will work on fescue. Eliminate invasive grasses from shrub thickets, fencelines and field edges.

October

- *Conduct quail covey call census 45 minutes before sunrise on clear calm mornings during mid- to late- Oct.
- *Most USDA Conservation Programs will announce new signups after October 1
- *Begin light disking through April 1(if thistles are a concern wait til late November to start)
- *Spray native grass plantings for invading brome and fescue after killing frost.
- *Prepare ground for spring shrub plantings

Important Quail Plants You Should Know.....

Common Ragweed.....bane for allergies but #1 wild quail food in Missouri!!!

There are numerous definitions of a weed, including:

- a plant out of place and not intentionally sown.
- a plant growing where it is not wanted.
- a plant whose virtues have not yet been discovered. (R.W. Emerson)
- and many others



Whatever your definition, ragweed is a weed to most people, but to quail and quail managers it is free food and cover.

Common ragweed seedlings emerge from May through July. Flowering parts are formed from July to September, and seeds mature from August to October. The pollen that is produced and distributed in abundant quantities from early August until frost is the cause of most of the hay fever in the late summer and fall

Seeds have several longitudinal ridges ending in short spines (similar to a crown). You can buy expensive ragweed seed to plant believe it or not.....but nature has probably already planted it for you. All you have to do is manage for it. Survival of seeds has been noted to last 80 years. The best management for ragweed includes fall disking, spraying and summer, fall or wintertime burning. It relishes disturbance...just like quail.

In late summers, when there has been adequate moisture many pastures will have a solid canopy of ragweed. And you will see many farmers mowing their pastures. But it is only a cosmetic solution. The ragweed has produced seed by then

and mowing doesn't solve the problem. We have many reports from people, who do mow the ragweed in pastures, that they see lots of quail.....studies have shown it is the most popular natural quail food in Missouri and it has the proper structure to provide fall and winter roosting for coveys. Don't mow it.....leave it for the birds!! Just remember that many four letter words....like 'WEED'.....are good for quail.

Don't forget to check out WWW.COVEYHEADQUARTERS.COM for archive issues of this newsletter and landowner testimonials from across the state. You may also write to the address on this newsletter for a free copy of our Quail Management How-To Video or the new "On the Edge" booklet. Or contact a Missouri Department of Conservation or NRCS office near you.

Did You Know.....Now is the time to make sure you have maintained your new plantings. If you have planted grass or shrubs this year and a canopy of weeds have developed.....it is time to clip and remove that canopy. On new grass plantings do not use a sickle bar or disc mower as you may smother the new seedlings...use a brush hog. On new shrub plantings, keeping the seedlings weed free may help reduce fall and winter rabbit damage and ensure greater survival. Take a look at your plantings and determine if you need to take action. Scout for invasive weeds like sericea lespedeza or birdsfoot trefoil and take immediate action!

MARK YOUR CALENDARS

The following are Quail Unlimited Banquets known to be scheduled for this fall. Banquets are one of the mechanisms that Chapters use to raise funds for local projects such as the Quail Habitat Initiative Cost-Share Program. Please support your local chapter.

August 26 Moreau Valley Chapter QU Banquet, Knights of Columbus Hall, St. Martins, 6:00 PM Contact Phil Rockers 573-796-0286 for advance tickets or information.

August 27 St. Louis Area Chapter QU Banquet. Contact Scot Mikols for details at 636-751-8250

October 2 Heartland Chapter QU Banquet, Knights of Columbus Hall, St. Joseph, 5:30 PM Contact Jeff Powelson at 816-567-2650 for advance tickets or information.

October 2 Mark Twain Chapter QU Banquet at Paris. Contact Bob Riley for details at 660-327-4433

October 2 Old Drum Chapter QU Banquet at Warrensburg. Contact Steve Andrew for details at 660-747-5513

Did You Know.....even if your food plots did not get planted this year or they are dominated by weeds and don't produce much grain they are still critical to quail. They serve as that "bare ground with a canopy of annual plants" component of quail habitat. And quail broods will use them this summer. When fall and winter come they will have produced wild quail foods and in some cases roosting cover. A great example of this happened this spring when Andrew White was trying to get his Dekalb County food plots in for a 4-H project. Excessive rains kept him out of the field til the last week of June.....he was disking down annual weeds and flushed 2 broods of quail in 2 different food plots.....whoops.

We thought you might like to know who compiles and edits this newsletter:

Travis Dinsdale, Area Biologist, St. Joseph, MDC

Jeff Powelson, Private Land Conservationist, St. Joseph, MDC

Paul Frese, Soil Conservationist, Albany, NRCS

Jim Humphrey, Livestock Specialist, Savannah, UME

Pat Graham, State Biologist, Columbia, NRCS

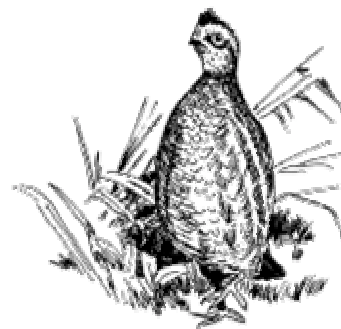
Bob Pierce, Extension Wildlife Specialist, Columbia, University of Missouri

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Jef Hodges, Regional Director, Clinton, QU

Bill White, Private Land Programs Supervisor, Jefferson City, MDC

Elsa Gallagher, Upland Wildlife Coordinator, Jefferson City, MDC



Special quail hunts set for Cover Prairie C.A. and Davidson-Paris W. A.

The Missouri department of Conservation is accepting applications for special quail hunts on the Dan and Maureen Cover Prairie Conservation Area and the Carrick W. Davidson- Robert G. Paris Wildlife Area.

Permits for the hunts will be issued by lottery. Applicants may apply for only one of the areas. Successful applicants will be given a one day permit to hunt on the area selected, during an assigned time period. There will be 18 hunts on Cover Prairie C.A. and 8 hunts on Davidson-Paris W.A. Each successful applicant will be allowed to take three other hunters. Each party will be allowed to take four quail.

To apply for these special hunts, contact: Missouri Department of Conservation, Special Quail Hunts, 551 Joe Jones Blvd., West Plains, MO 65775 or call 417-256-7161. All applicants must include the area on which they wish to hunt, the applicants name, permanent mailing address, phone number and the names of no more than three additional people who will be in the hunting party. No person's name may be listed on more than two permits. Applications will be accepted from Sept. 1 thru Sept. 30. Successful applicants will be notified by mail by Oct. 15.

UNIVERSITY OF MISSOURI
 Extension

 NRCS Natural Resources
Conservation Service



The Covey Headquarters Newsletter
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RETURN SERVICE REQUESTED